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## Education

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### University of Ottawa

Sep 2020 – Dec 2024

*Bachelor of Software Engineering (CO-OP)*

*Ottawa, ON, Canada*

- Courses: Machine Learning, Operating Systems, Software Architecture, Systems Design, Algorithms & Data Structures

## Work Experience

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### Comtech Telecommunications

Jan 2025 – Present

*Software Engineer I*

*Gatineau, QC, Canada*

- Scaled event-log pipeline to **10 M events/day** via schema normalization and index tuning, cutting query latency **70%**.
- Built resilient **SQS**→**S3** consumer (C/.NET) with circuit-breaker and parallel downloads, halving ingest time.
- Automated least-privilege releases via **Terraform** (TDD), onboarding new workloads to ECS Fargate.

### Comtech Telecommunications

May 2024 – Aug 2024

*Software Engineer Intern*

*Gatineau, QC, Canada*

- Streamlined environment provisioning by **25%** through modularizing **Infrastructure as Code** with **Terraform** and **Terragrunt**, significantly reducing deployment time.
- Cut operational costs by **20%** by converting a monolithic service into **AWS Lambda Functions** with reusable **Lambda layers** and **python**, increasing processing speed by **28%** and code reuse by **36%**.
- Engineered **auto-scaling** services via **AWS Fargate**, **ECS**, and **ECR**, enhancing system resilience and enabling on-demand scalability, which improved service uptime by **25%**.
- Enhanced security with **CIS-compliant EC2** images, **SSL certificates**, and managing DNS with **Route 53**.

### Zafin

May 2023 – Sep 2023

*Software Developer Intern*

*Toronto, ON, Canada*

- Developed and **deployed** an **NLP platform** integrating **OpenAI** and **Hugging Face LLMs** on **Azure Container Apps**, facilitating natural language interactions with Zafin **REST APIs** and increasing feature adoption.
- Built a **microservices** architecture with **Spring Boot**, **Flask**, **Azure Blob**, and **Cosmos DB**, ensuring **99%** uptime.
- **Organized** weekly **Agile ceremonies**, elevating team productivity and improving sprint completion rates by **20%**.

### Cision PR Newswire

Jan 2022 – Sep 2022

*Backend Developer Intern*

*Ottawa, ON, Canada*

- Designed **fault-tolerant, event-driven microservices** for an ingestion and enrichment pipeline using **Java**, **Spring Boot**, **Kafka**, and **Kubernetes**, improving scalability and boosting data processing efficiency by **10%**.
- Created tools for **testing** microservices with **Cucumber**, **CI/CD**, and **Java**, reducing deployment errors by **15%**.
- **Containerized** microservices with **Docker** and orchestrated deployments on **Kubernetes**, optimizing resource usage.
- **Migrated** on-premise servers to **GCP**, achieving **99%** uptime and significantly enhancing reliability and scalability.

## Projects

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### Capstone Business Communication Software | [Website](#) | [Source Code](#)

**ReactTS** | **Spring Boot** | **PostgreSQL**

- **Led the development** of a BCS, delivering a responsive **React/TypeScript** frontend via **Azure Web Apps**.
- Developed **Spring Boot microservices**, introduced **CI/CD** pipelines, and deployed on **Azure Container Service**.
- Enabled secure authentication for **100+** users using **OAuth** with **Azure Active Directory** and implemented Twilio messaging for SMS/MMS, reducing manual communication by **80%**.

### Web Scraping Project | [Source Code](#)

**Spring Boot** | **Mongo DB** | **PostgreSQL** | **JWT**

- Designed a **client-server** distributed architecture using **Java** and **Spring**, providing robust web scraping capabilities.
- Integrated **Redis** for caching, **Kafka** for **event-driven** data processing, and API Gateways to achieve high availability.
- Secured services with custom **JWT-based authentication** and authorization, adhering to clean architecture standards.

## Technical Skills

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**Languages:** Java, Python, TypeScript, C#, C++, HTML, CSS, SQL, NoSQL, Terraform

**Developer Tools:** AWS, Azure, Docker, Git, VSCode, IntelliJ, Postman, PowerBI, Jira, Confluence, GitHub

**Frameworks:** Spring, Flask, Next.js, Angular, Bootstrap, React, React Native, .NET, Android Studio, Unity, DBT